
PRI installation: NT, 51/51C, 61/61C

PRI circuit card locations

Each PRI circuit card requires two adjacent slots on a shelf. As many as five circuit cards can be plugged into any empty network shelf, along with the power converter card, depending on the shelf type. See [Tables 49 and 50](#) for card slot positions.

If additional network shelves are required, use the NT8D35 Network Module. See *Meridian 1 system installation procedures* (553-3001-210).

Cable requirements

Shielded 22 AWG (0.644 mm) cable is recommended for connecting the PRI to the cross connect point. This cable consists of two shielded twisted-pair conductors and two shields.

The transmit and the receive pairs must be individually shielded and enclosed in a polyvinyl jacket. This type of cable is commonly referred to as “6-conductor” cable. T1 cable shielding should be grounded at the cross-connect point.

To manufacture cables of different lengths than the standard cables provided, see [“PRI cabling information” on page 169](#).

The recommended order of PRI connections for the Universal I/O Panel (P0715058) for the NT6D39 CE/Network Module (system option 51/61) is as follows:

- with Echo Cancellor, J4, J12, and J24 for the T1 and J8, J20, and J28 for the Echo Cancellor
- without Echo Cancellor, J8, J12, J20, J24, and J28 for the T1s

Installing the QPC720 PRI

This procedure describes how to install the QPC720 PRI card in an NT, 51/51C, or 61/61C.

Procedure 6

Installing the QPC720 PRI in NT, 51/51C, 61/61C

- 1 Determine the cabinet and shelf location of the circuit card to be installed. The following slots can be used if they are not required for other cards.

Table 11

Shelf and slot location of QPC720 in NT or option 61

System	Shelf	Slot
NT	QSD39 Network (LH)	5–10 Note 1
	QSD40 Network (RH)	5–10 Notes 1, 2
	QSD39 DTI/PRI only	2–10 Notes 1, 4 12–14
	QSD40 DTI/PRI only	2–3 Note 1 5–13
61/61C	NT6D39 CPU/NET	3–8 Note 1 18 Note 3
	NT8D35 DTI Exp Cube	2–3 Note 1 5–14 Note 1
	NT8D47 RPE Cube	1, 11, 12
Note 1: DTI/PRI packs require two slots. The slot indicated is the maximum slot that the pack resides in. For example, the slot 14 pack uses slots 13 and 14.		
Note 2: The DTI/PRI pack cannot be installed in slot 11. The pack would come in contact with the BTU installed between slots 11 and 12.		
Note 3: Slot 18 is only available on CPU shelf, which has no MDU/FDU.		
Note 4: DTI/PRI pack could reside in slots 10 and 11, but cannot reside in slots 11 and 12 because of powering restrictions.		

- 2 Unpack and inspect circuit cards.
- 3 Set option switches on the PRI circuit card. See [Figure 17](#) and [Table 12](#).
- 4 Install PRI circuit card in the assigned shelf and slot.
- 5 Install network circuit card (if no network loop connection is available).
- 6 If required, install I/O adapters in I/O panel.
- 7 Run and connect the PRI cables. See [Figures 13](#) and [14](#). [Figures 15](#) and [16](#) show the NT, 51/51C, 61/61C PRI cabling. Refer also to [Table 13](#).
- 8 If required, install connecting blocks at MDF or wall-mounted cross-connect terminal.
- 9 If required, designate connecting blocks at MDF or wall-mounted cross-connect terminal.
- 10 If required, install CSU or Echo Canceller.
- 11 Cross-connect PRI circuits.
- 12 Add related office data into system memory. Refer to the work order.
- 13 Run PRI verification tests.

Removing the QPC720 PRI

The following procedure describes how to remove the QPC720 PRI card from the NT, 51/51C, 61/61C.

Procedure 7

Removing the QPC720 PRI in the NT, 51/51C, 61/61C

- 1 Disable the D-channel in LD 96.
- 2 Disable Network Loop using LD 60. The command is DISL x.
- 3 If the circuit card is being completely removed, not replaced, remove data from memory. See *ISDN Primary Rate Interface description and administration* (553-2901-100).
- 4 Determine the location of the circuit cards to be removed.
- 5 Remove cross connections at MDF to wall-mounted cross-connect terminal.
- 6 Disconnect PRI cables at Echo Cancellor and at carrier interface (for example, Office Repeater and NCTE equipment).
- 7 Tag and disconnect cables from card. Rearrange Clock Controller card cables if required. This will affect call processing on DTI/PRI loops.
- 8 Remove PRI and network circuit cards. If the other circuit of a dual network card is in use, DO NOT remove the network card.
- 9 Pack and store circuit card.

Note: No additional cabling is required for multiple PRIs. The D-channel is associated through software in LD 17, prompt PRI.

Table 12
Transmission equalization switch settings for PRI

Switch S2 settings	To repeated facility	To cross-connect point
5 ON	0–45 m (0–150 ft)	0–30 m (0–100 ft)
2, 4, 6 ON	46–135 m (151–450 ft)	31–100 m (101–355 ft)
1, 3, 7 ON	136–225 m (451–750 ft)	101–200 m (356–655 ft)
Switch 3 options for PRI/DTI with ESF		
SW3-1	ON = extended superframe format (ESF) OFF = superframe format (SF)	
SW3-2	ON = B8ZS line encoding (required for 64K clear option) OFF = AM1 line encoding	
SW3-3	ON = facility data link (FDL) yellow alarm method (cannot be used in Canada) OFF = Digit 2 yellow alarm method	
Note 1: All switch positions for S2 (location B22) are OFF except as shown under the column labeled “Switch S2 settings.” The 8-pole SW3 (location E37) switch positions are OFF except as shown for “Switch 3 options for PRI/DTI with ESF.” Note 2: For D2, D3, or D4 framing formats (superframe formats), set all SW3 options to OFF.		

Table 13
Cable connections and destinations for NT, 51/51C, 61/61C

Cable	From	Des.	Con.	To	Des.	Con.	Comments
For half group only							
QCAD130 NT8D79xx	QPC720		J1	QPC471/ QPC775	CC-0	J2	Only when primary clock source.
QCAD130 NT8D79xx	QPC720		J1	QPC471/ QPC775	CC-0	J1	Only when secondary clock source.
NTND26	QPC720		J5	NT6D80			X11 release 18 and later.
For single group only							
QCAD130 NT8D79xx	QPC720		J2	QPC471/ QPC775	CC-1	J2	Only when primary clock source.
QCAD130 NT8D79xx	QPC720		J2	QPC471/ QPC775	CC-1	J1	Only when secondary clock source.
QCAD125 NT8D75xx	QPC471/ QPC775	CC-0	J3	QPC471/ QPC775	CC-1	J3	Clock controller back-up.
QCAD124 NT8D85xx	QPC720		J3	Network			Run directly to network card.
QCAD328A	QPC720		J5	QPC757		J2	Run directly to DCHI card.
NTND26	QPC720		J5	NT6D80			X11 release 18 and later.
QCAD133	I/O Panel			Patch panel			Run via cabinet I/O panel to CSU, Echo Cancellor, or cross-connect terminal.
QCAD129	QPC720		J6	I/O Panel			
RS-232	I/O Panel			Echo Cancellor			
RS-232	QPC720		J6	Echo Cancellor			
QCAD133 NT8D83xx	QPC720		J4	Patch panel			Run via cabinet I/O panel to cross-connect terminal or Echo Cancellor from non-shielded system.

Figure 13
Half group cabling without Echo Canceller

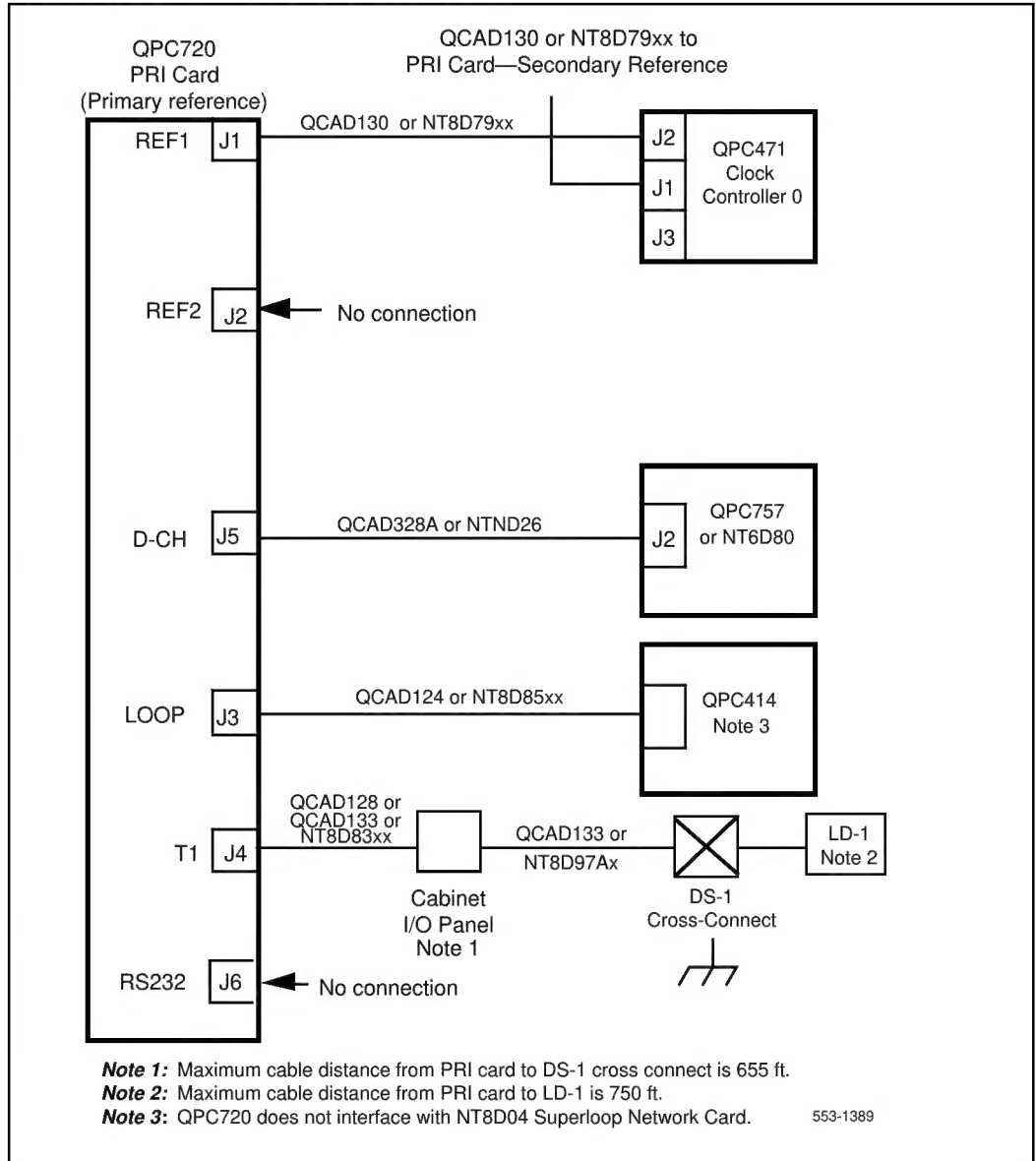


Figure 14
Half group cabling with Echo Canceller

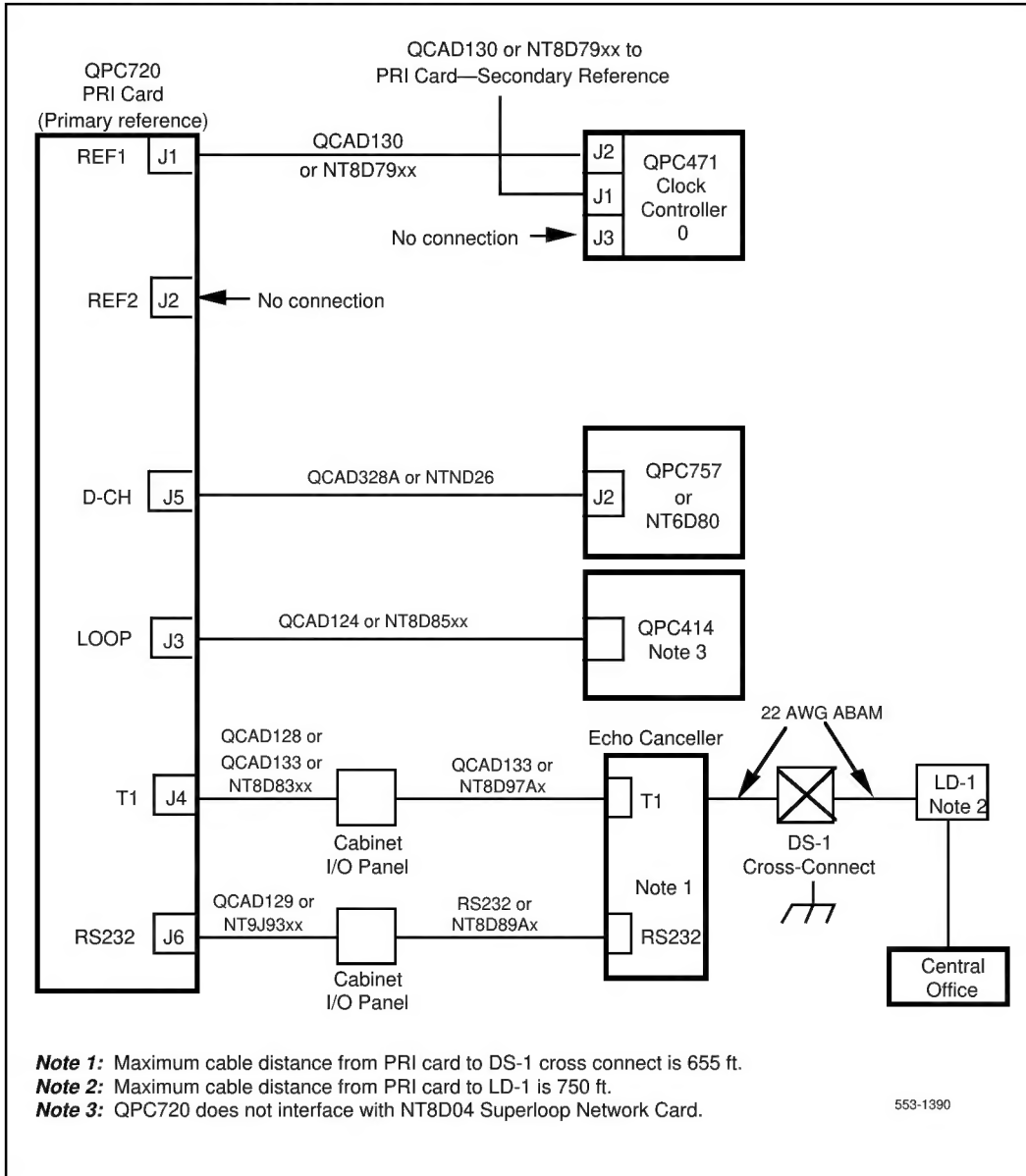


Figure 15
Single group cabling without Echo Canceller (NT, 61/61C)

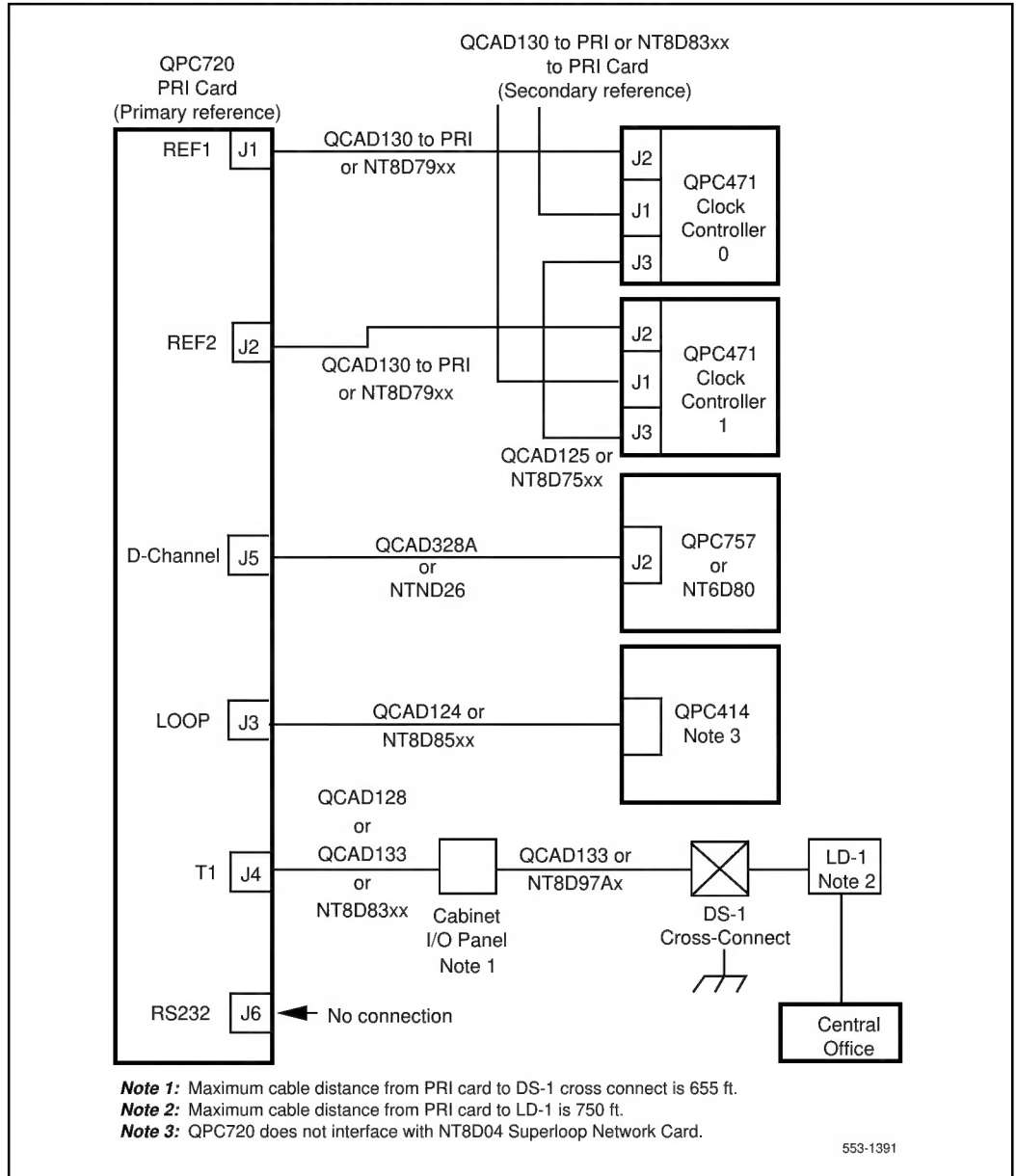


Figure 16
Single group cabling with Echo Cancellor (NT, 61/61C)

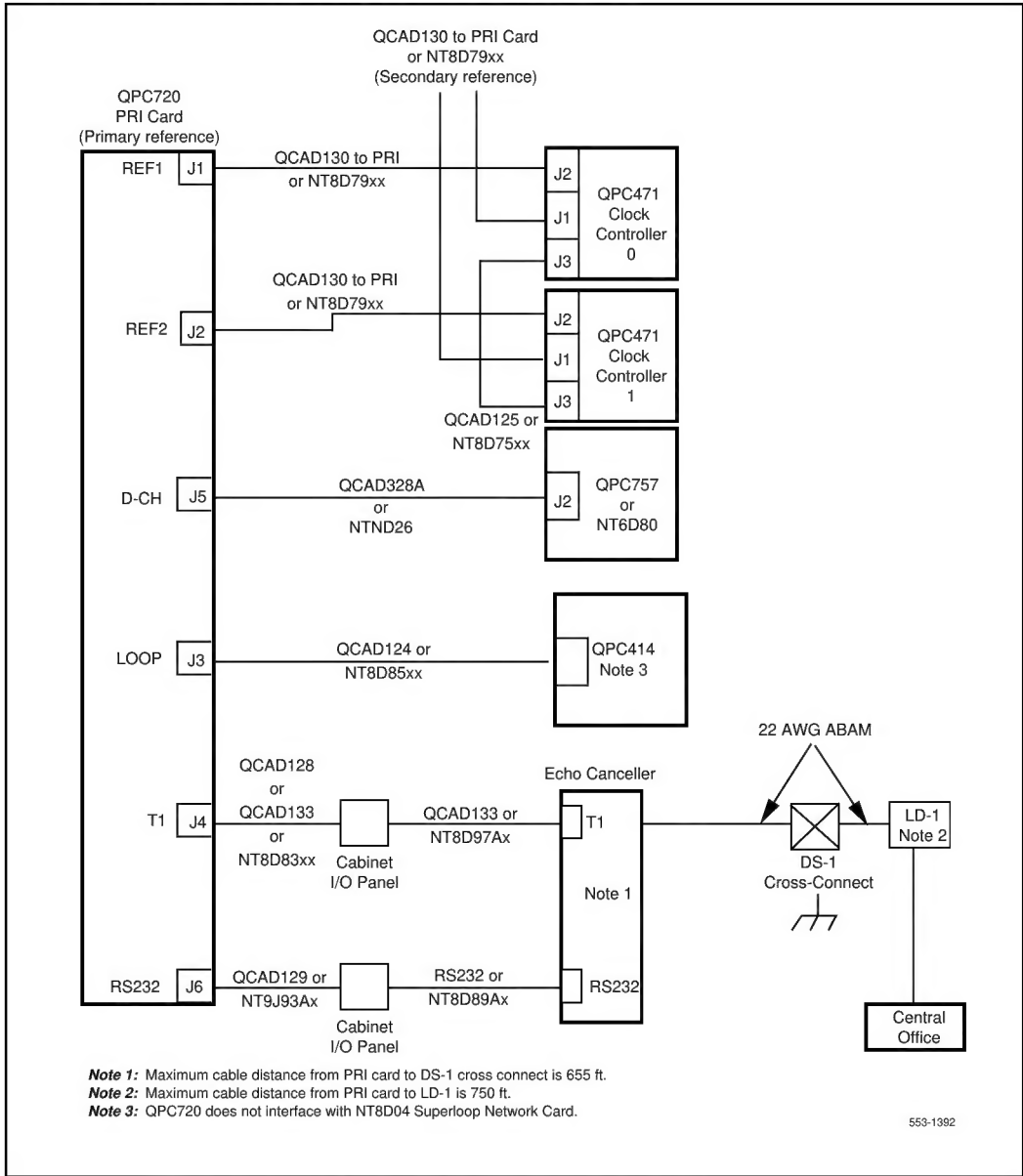


Figure 17
PRI card (QPC720) switch settings

